GETTING STARTED GUIDE

Cisco ME 3400E Ethernet Access Switch Getting Started Guide

INCLUDING LICENSE AND WARRANTY

1 About this Guide, page 2
2 Taking Out What You Need, page 2
3 Initial Setup, page 5
4 Managing the Switch through the CLI, page 8
5 Rack-Mounting the Switch, page 9
6 Connecting to the Switch Ports, page 12
7 In Case of Difficulty, page 13
8 Obtaining Documentation and Submitting a Service Request, page 15
9 Cisco 90-Day Limited Hardware Warranty Terms, page 15

1 About this Guide

This guide provides instructions on how to install and configure your Cisco Metro Ethernet (ME) 3400E Ethernet Access switch. Also covered are switch management options, basic rack-mounting procedures, port and module connections, power connection procedures, and troubleshooting help.

For additional installation and configuration information, see the Cisco ME 3400E switch documentation on Cisco.com. For system requirements, important notes, limitations, open and resolved bugs, and last-minute documentation updates, see the release notes, also on Cisco.com.

When you use the online publications, refer to the documents that match the Cisco IOS software version that is running on the switch. Look on the switch rear panel to locate the software version or enter the **show version** command from the command-line interface (CLI).

Before you set up your switch, and to see translations of safety warnings, review the warnings in the *Regulatory Compliance and Safety Information for the Cisco ME 3400E Ethernet Access Switch* on the documentation CD or Cisco.com.

2 Taking Out What You Need

1. Unpack and remove the switch and the accessory kit from the shipping box.
2. Return the packing material to the shipping container, and save it for future use.
3. Verify that you have received the items shown in the "Shipping Box Contents" section on page 3. If any item is missing or damaged, contact your Cisco representative or reseller for instructions. Some switch models might include additional items, and you might need to supply or to order some optional items.

Equipment That You Supply to Set Up Your Switch

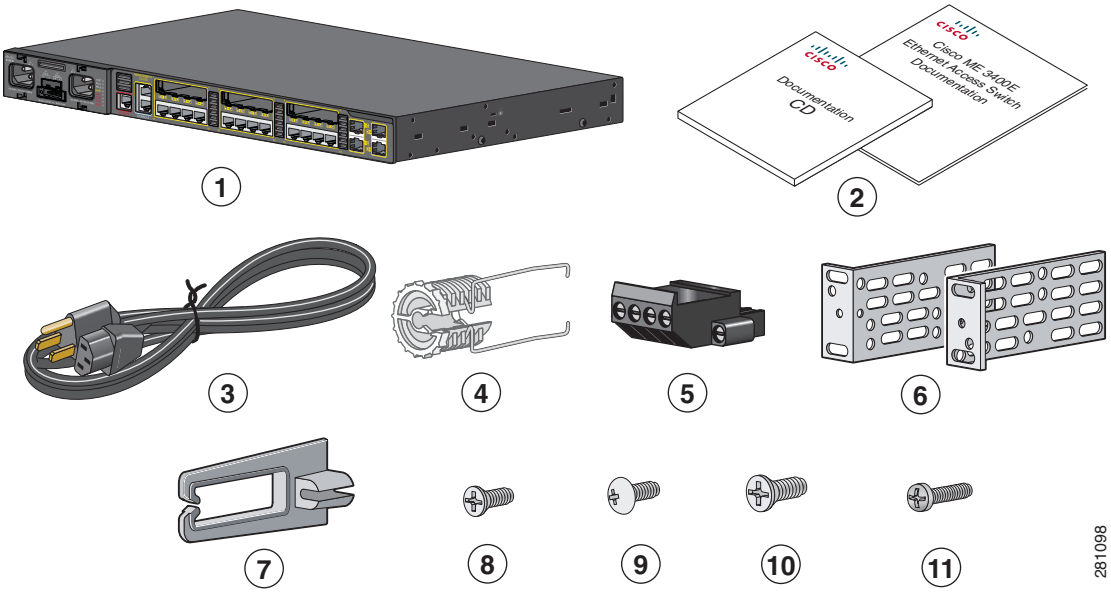
You need:

- PC
- RJ-45-to-DB-9 adapter cable (if you did not order one with your switch)
- Ethernet (Category 5) straight-through cable (as shown)

Shipping Box Contents

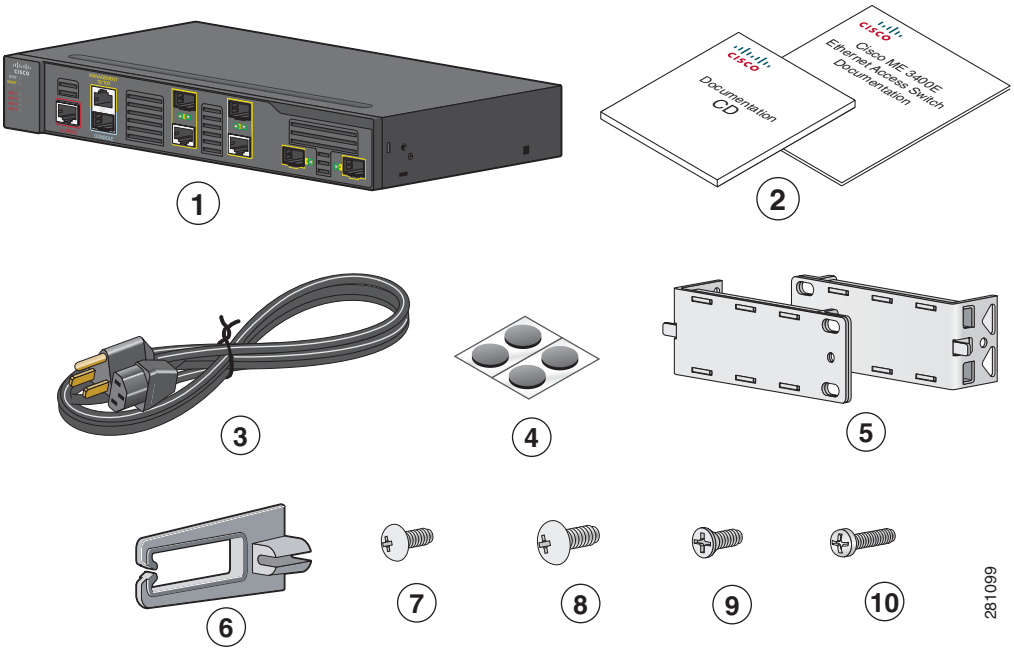
The items shipped with your switch depend on the switch model, the options that you choose, and the type of power-supply module. Some items shown are optional, and your switch might look different.

These items ship with the Cisco ME 3400E-24TS-M and the Cisco ME 3400EG-12CS-M switches:



1	Cisco ME 3400E switch	**7**	Cable guide
2	Documentation	**8**	Four number-8 Phillips machine screws
3	AC power cord	**9**	Four number-12 Phillips truss-head screws
4	Power cord bail and bushing	**10**	Six number-8 Phillips flat-head screws
5	DC terminal block	**11**	One black Phillips machine screw
6	Two 19-inch mounting brackets		

These items ship with the Cisco ME 3400EG-2CS-A switch:



1	Cisco ME 3400E switch	**6**	Cable guide
2	Documentation	**7**	Four number-10 Phillips truss-head screws
3	AC power cord	**8**	Four number-12 Phillips truss-head screws
4	Four rubber feet	**9**	Two number-10 Phillips flat-head screws
5	Two 19-inch mounting brackets	**10**	One black Phillips machine screw

Safety Warnings

Translations of these warning statements and a complete list of warnings that are applicable to this switch appear in the *Regulatory Compliance and Safety Information for the Cisco ME 3400E Ethernet Access Switches* document that shipped with your switch.

Warning **Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.** Statement 43

Warning **Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.** Statement 48

This warning applies to only the Cisco ME 3400E-24TS-M and the Cisco ME 3400EG-12CS-M switches:

Warning **Before performing any of the following procedures, ensure that power is removed from the DC circuit.** Statement 1003

Warning **To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

- **This unit should be mounted at the bottom of the rack if it is the only unit in the rack.**
- **When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.**
- **If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.** Statement 1006

Warning **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.** Statement 1022

Warning **This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.** Statement 1024

This warning applies to only the Cisco ME 3400E-24TS-M and the Cisco ME 3400EG-12CS-M switches:

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030

Warning **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.** Statement 1045

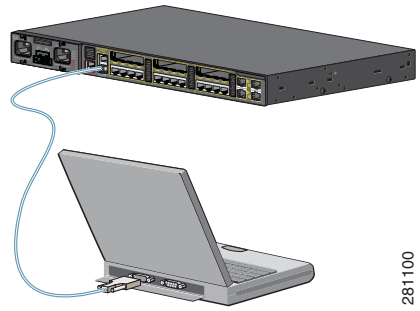
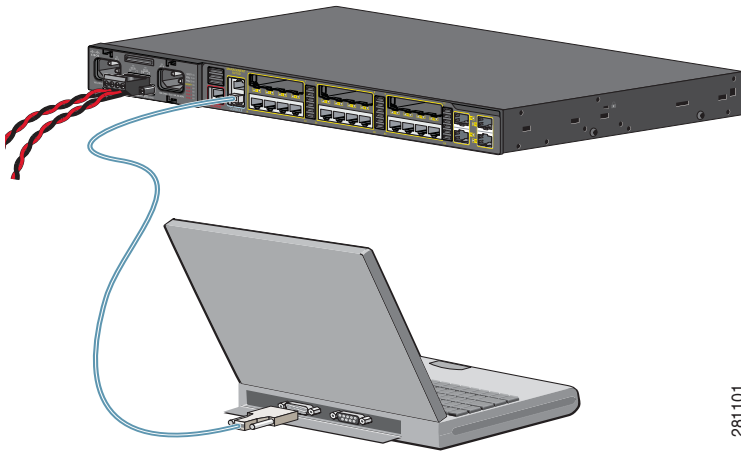
Warning **To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 122°F (50°C)** Statement 1047

Warning **Installation of the equipment must comply with local and national electrical codes.** Statement 1074

3 Initial Setup

When you set up the switch to enter the initial IP information, the switch can then connect to local routers and the Internet. For further configuration, access the switch CLI.

Your switch might look different from the illustrations, but the instructions apply to all the Cisco ME switches. Some instructions depend on whether the switch uses AC or DC power.

Step 1	Obtain this information from your network administrator before you start the setup program.	• Switch IP address • Subnet mask (IP netmask) • Default gateway (router) • Enable secret password • Enable password • Telnet password
Step 2	Connect the adapter cable to the console connector on the switch front panel. Connect the other end of the cable to the Ethernet port on your DHCP-enabled PC. You must supply the console cable if you did not order one with your switch.	
Step 3	Start a terminal-emulation application such as Hyperterminal or ProcommPlus.	
Step 4	Configure the baud rate and character format of the PC or terminal to match these console port default characteristics.	• 9600 baud • 8 data bits • 1 stop bit • No parity • None (flow control)
Step 5	Connect the switch to a power source. For information on power usage, see the technical specifications in the hardware installation guide. This illustration shows a DC-powered switch. Connect one DC terminal block to the power connector on the switch front panel. Connect the other end of the cable to a DC outlet. For detailed instructions about connecting to an AC or DC power source, see "Chapter 3, Installing and Removing the Power-Supply Modules," in the hardware installation guide.	
Step 6	Power on the switch.	
Step 7	Wait for the switch to complete POST.	It might take several minutes for the switch to complete POST.
Step 8	Verify that POST has completed. The System (SYST) LED blinks green while the switch starts up. It turns solid green after POST succeeds. If the switch fails POST, the System LED turns amber.	Contact Cisco Systems immediately if your switch fails POST.
Step 9	When you see the prompt, press **Return** or **Enter**.	`Press RETURN to get started!`

Completing the Initial Configuration

Follow these steps to complete the setup program and to create the initial configuration for the switch.

Step 1 After you press **Enter** or **Return** at the prompt to start the initial configuration setup program, enter **Yes** at these prompts:

```
Would you like to terminate autoinstall? [yes/no]: yes

Would you like to enter the initial configuration dialog? [yes/no]: yes

At any point you may enter a question mark '?' for help.
Use ctrl-c to abort configuration dialog at any prompt.
Default settings are in square brackets '[]'.

Basic management setup configures only enough connectivity
for management of the system, extended setup will ask you
to configure each interface on the system.

Would you like to enter basic management setup? [yes/no]: yes
```

Step 2 Enter a hostname for the switch, and press **Return**.

The hostname is limited to 20 characters. Do not use *-n*, where n is a number, as the last character in a hostname for any switch.

```
Enter host name [Switch]: host_name
```

Step 3 Enter an enable secret password, and press **Return**.

The password must be different from the enable secret password and can be from 1 to 25 alphanumeric characters, can start with a number, is case sensitive, allows spaces, but ignores leading spaces. The secret password is encrypted, and the enable password is in plain text.

```
Enter enable secret: secret_password
```

Step 4 Enter an enable password, and press **Return**.

```
Enter enable password: enable_password
```

Step 5 Enter a virtual terminal (Telnet) password, and press **Return**.

The password can be from 1 to 25 alphanumeric characters, is case sensitive, allows spaces, but ignores leading spaces.

```
Enter virtual terminal password: terminal-password
```

Step 6 (Optional) Configure Simple Network Management Protocol (SNMP) by responding to the prompts. You can also configure SNMP later through the CLI. To configure SNMP later, enter **no**.

```
Configure SNMP Network Management? [no]: no
```

Step 7 At the prompt, enter either **FastEthernet0 or** the VLAN name (usually VLAN1) as the interface connected to the management network, and press **Return**.

```
Enter interface name used to connect to the
management network from the above interface summary: FastEthernet0
```

Step 8 Enter **Yes** after the prompt, and then enter the switch IP address and subnet mask. Press **Return**.

The IP address and subnet mask shown to the right are examples.

```
Configuring interface vlan1:
Configure IP on this interface? [yes]: yes

IP address for this interface: 10.4.120.106

Subnet mask for this interface [255.0.0.0]: 255.0.0.0
```

Step 9 Enter **N** when the prompt asks if you want to enable the switch as a cluster command switch. This switch will be a standalone switch that does not support clustering.

```
Would you like to enable as a cluster
command switch? [yes/no]: no
```

The switch displays its initial configuration, as shown on the right.

```
The following configuration command script was created:
hostname switch1
enable secret 5 $1$Ulq8$DlA/OiaEbl90WcBPd9cOn1
enable password enable_password
line vty 0 15
password terminal-password
no snmp-server
!
no ip routing

!
interface Vlan1
no shutdown
ip address 10.4.120.106 255.0.0.0
!
interface FastEthernet0/1
!
interface FastEthernet0/2

...<output abbreviated>

interface FastEthernet1/0/3
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
end
```

Step 10 These choices appear:

```
[0] Go to the IOS command prompt without saving this config.

[1] Return back to the setup without saving this config.

[2] Save this configuration to nvram and exit.

If you want to save the configuration and use it the next time the switch reboots, save it in NVRAM
by selecting option 2.

Enter your selection [2]:2
```

Make your selection, and press **Return**.

Step 11 Disconnect the switch from the PC, and install the switch in your network. See the "Managing the Switch through the CLI" section on page 8 for information about configuring and managing the switch.

If you need to rerun the initial configuration dialog, see the "Resetting the Switch" section on page 13.

4 Managing the Switch through the CLI

After you install the switch in your network, you can enter Cisco IOS commands and parameters through the CLI. Access the CLI either by connecting your PC directly to the switch console port or through a Telnet session from a remote PC or workstation.

Other Management Options

You can use SNMP management applications such as CiscoWorks Small Network Management Solution (SNMS) and HP OpenView to configure and manage the switch. You also can manage it from an SNMP-compatible workstation that is running platforms such as HP OpenView or SunNet Manager.

The Cisco IE2100 Series Configuration Registrar is a network management device that works with embedded CNS agents in the switch software. You can use IE2100 to automate initial configurations and configuration updates on the switch.

See the "Accessing Troubleshooting Information on Cisco.com" section on page 14 for a list of supporting documentation.

5 Rack-Mounting the Switch

This section covers 19-inch rack-mounting. For alternate mounting procedures, such as installing the switch in a 23-inch, 24-inch, or a European Telecommunication Standards Institute (ETSI) rack, or installing a switch on a wall, see the *Cisco ME 3400E Ethernet Access Switch Hardware Installation Guide* on Cisco.com.

Equipment That You Supply

You need to supply a number-2 Phillips screwdriver to rack-mount the switch. You must supply other types of mounting hardware such as ETSI brackets or other hardware that does not ship with the switch.

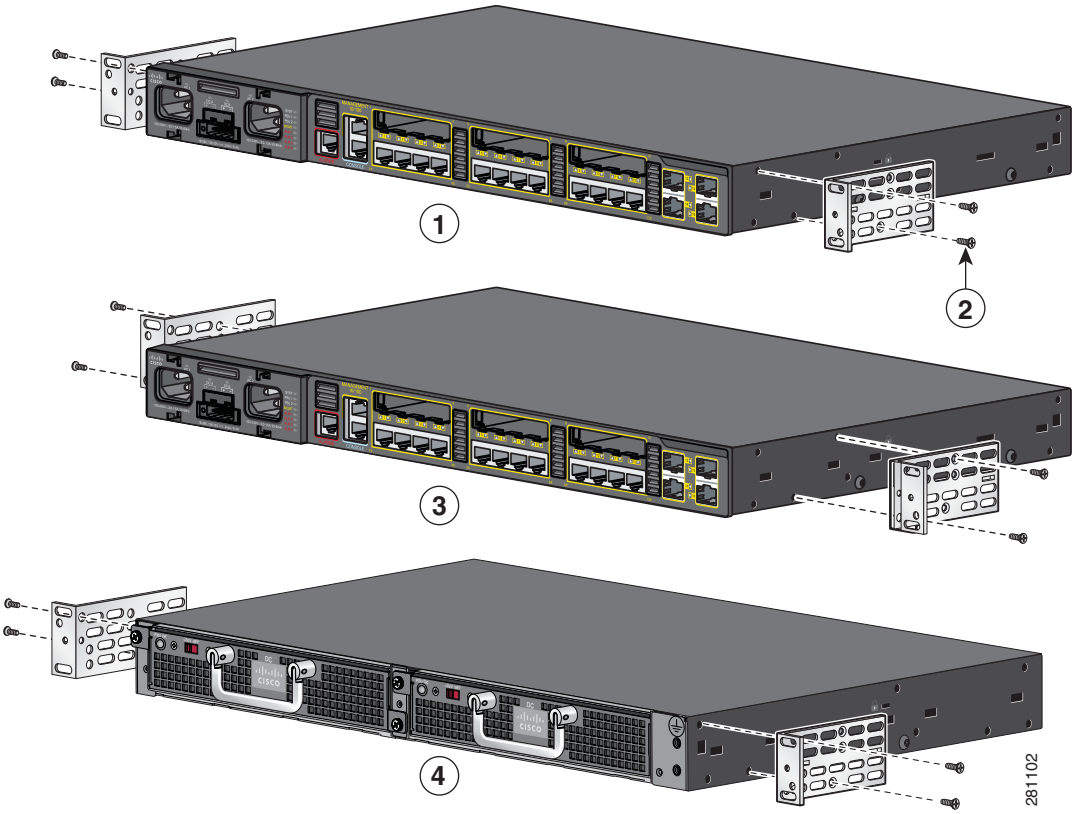
Before You Begin

When you determine where to install the switch, verify that these guidelines are met:

- Airflow around the switch and through the vents is unrestricted.
- Clearance to the switch front and rear panels meets these conditions:
  - You can easily see the System, MGMT, Alarm, port, and power-supply LEDS.
  - You have sufficient access to ports for cabling.
  - The AC power cord can reach from the power outlet to the front-panel connector.
  - The DC power cable can reach from the power outlet to the front-panel connector.
- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.
- For 10/100 or 10/100/1000 ports, the cable length from a switch to an attached device cannot exceed 328 feet (100 meters).
- For cable lengths for small form-factor pluggable (SFP) modules, see the documentation that shipped with the module.
- Temperature around the switch does not exceed 122°F (50°C).
- Humidity around the switch does not exceed 95 percent.
- Altitude at the installation site is not greater than 10,000 feet.

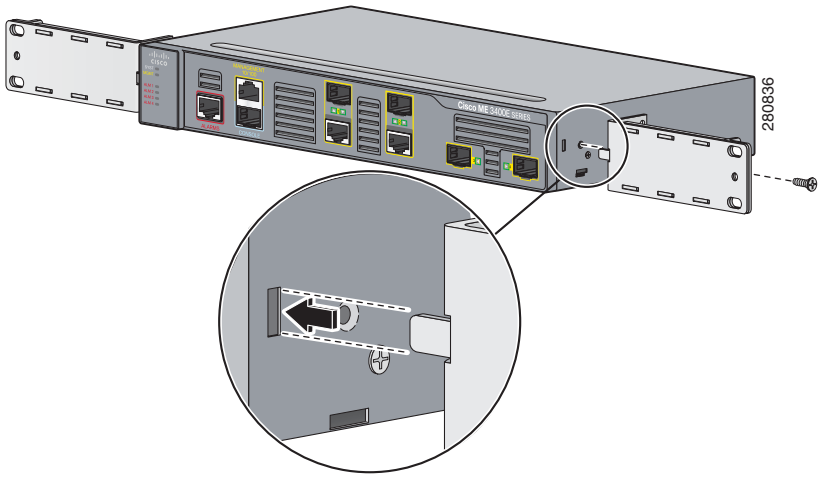
Attaching the Brackets

Use four Phillips flat-head screws to attach the long side of the brackets to the switches in one of mounting positions (for all but the Cisco ME 3400EG-2CS-A switch):



1	Front-mounting position	**3**	Mid-rack mounting position (telco rack)
2	Number-8 Phillips flat-head screws	**4**	Rear-mounting position

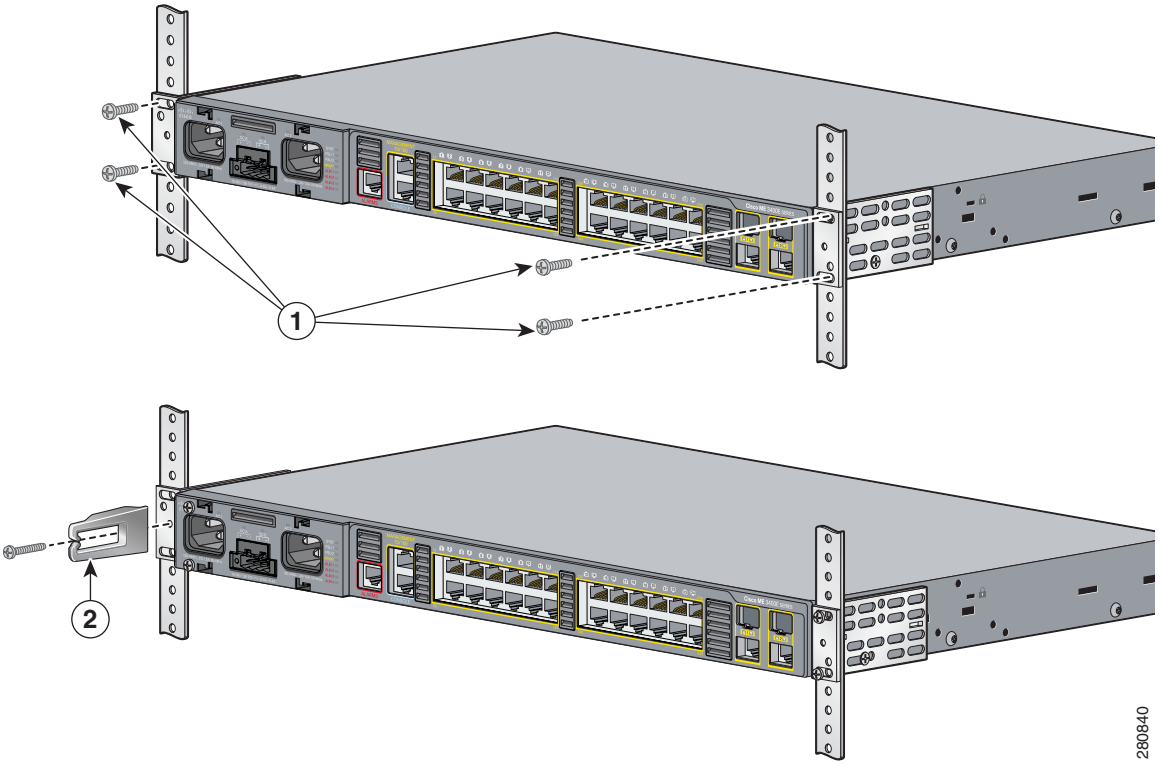
Use the tab on the bracket and the Phillips flat-head screw to attach the short side of each bracket to the Cisco ME 3400EG-2CS-A switch in this mounting position:



Rack-Mount the Switch

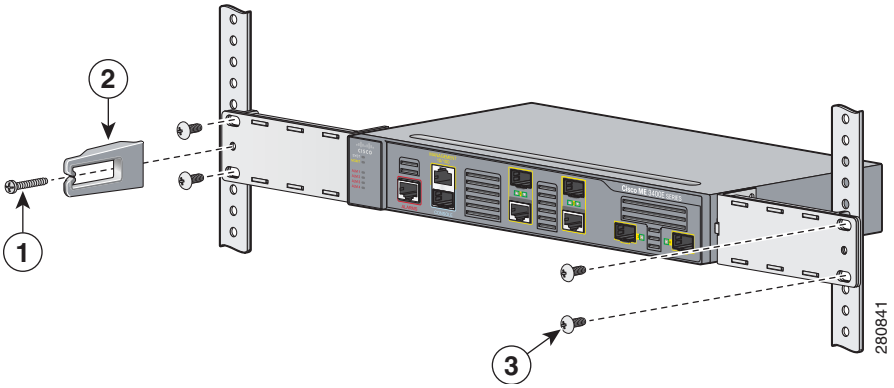
Use the black Phillips machine screw to attach the cable guide to the left or right bracket and the supplied screws to attach the brackets to the rack:

- Cisco ME 3400E-24TS-M and Cisco ME 3400EG-12CS-M switches:



1	Black Phillips machine screw	**2**	Cable guide and screw

- Cisco ME 3400EG-2CS-A switch:



1	Black Phillips machine screw	**3**	Number-10 Phillips truss-head screws
2	Cable guide		

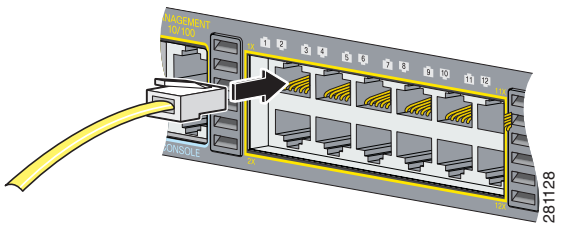
6 Connecting to the Switch Ports

This section describes how to connect to the fixed switch ports and to the SFP module ports. The switch in the illustrations might be different from your switch, but the instructions apply to all Cisco ME 3400E switches.

Connect to 10/100 or 10/100/1000 Ports

Step 1 When you connect to servers, workstations, customer-premises equipment (CPE), wireless access points, and routers, insert a straight-through, twisted four-pair, Category 5 cable in a switch 10/100 or 10/100/1000 port.

Use a crossover, twisted four-pair, Category 5 cable when you connect to other switches, hubs, or repeaters.



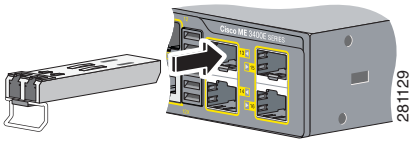
Step 2 Insert the other end of the cable into a connector on the other device.

Note The automatic medium-dependent interface crossover (auto-MDIX) feature is enabled by default. The switch detects the required cable type for copper Ethernet connections and configures the interfaces accordingly. You can use either a crossover or a straight-through cable for connections to a copper 10/100, 10/100/1000, or 1000BASE-T SFP module port on the switch, regardless of the type of device on the other end of the connection.

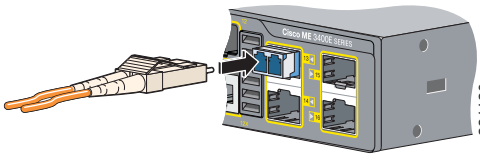
Install the SFP Modules and Connect to the Ports

Caution To prevent damage to the SFP module, make sure that you verify the proper orientation of the module by consulting the module documentation before you install it.

Step 1 Grasp the SFP module on the sides, and insert it into the switch slot until you feel the connector snap into place.



Step 2 Insert an appropriate cable into the SFP module port. Insert the other cable end into the other device.



For a list of supported modules, see the release notes on Cisco.com. For detailed instructions on installing, removing, and connecting to SFP modules, see the SFP module documentation.

Caution Removing and installing an SFP module can shorten its useful life. Do not remove and insert SFP modules more often than is absolutely necessary.

For instructions on using the SFP patch cable, see the "Switch Installation" chapter of the hardware installation guide.

Verify Port Connectivity

After you connect to the switch port, the port LED turns amber while the switch establishes a link. This process takes about 30 seconds. After the switch and the target device establish a link, the port LED turns green. If the LED is off, the target device might not be turned on, there might be a cable problem, or there might be a problem with the adapter installed in the target device. See the "In Case of Difficulty" section on page 13 for information about online assistance.

7 In Case of Difficulty

If you experience difficulty, help is available here and on Cisco.com. This section includes initial setup troubleshooting, how to reset the switch, how to access help online, and where to find more information.

Troubleshooting Initial Configuration Setup

If you have problems running the initial configuration dialog:

• Did you verify that POST ran successfully before running the initial configuration dialog?	If not, make sure that only the System LED is green before pressing the Break key or entering a break character.
• Did you press the Break key while the switch was still running POST?	If yes, wait until POST completes. Power-cycle the switch. Wait until POST completes. Confirm that the System LED is green. Enter **Reload** to reinstall the flash memory.
• Did you wait 30 seconds after you connected the switch and the PC before you entered the IP address in your browser?	If not, wait 30 seconds, re-enter **10.0.0.1** in the browser, and press **Enter**.
• Did you forget your password?	See the "Recovering from a Lost or Forgotten Password" section in the Troubleshooting appendix of the software configuration guide.

Resetting the Switch

This section describes how to reset the switch by rerunning the initial configuration dialog (system configuration dialog). These are reasons why you might want to reset the switch:

- You installed the switch in your network and cannot connect to it because you assigned the wrong IP address.
- You want to clear all the configuration settings from the switch and assign a new IP address.

Caution Resetting the switch deletes the configuration and reboots the switch.

To reset the switch:

- At the `switch#` prompt, enter **enable**, and press **Return or Enter.**
- At the `switch#` prompt, enter **setup,** and press **Return or Enter.**

The switch displays the prompt to run the initial configuration dialog. See the "Initial Setup" section on page 5 to re-enter the configuration information and to set up your switch.

Accessing Troubleshooting Information on Cisco.com

First look for a solution to your problem in the troubleshooting section of the hardware installation guide or the software configuration guide on Cisco.com. You can also access the Cisco Technical Support and Documentation website for a list of known hardware problems and extensive troubleshooting documentation.

For More Information

For more information about the switch, see these documents on Cisco.com:

- *Cisco ME 3400E Ethernet Access Switch Hardware Installation Guide*
- *Regulatory Compliance and Safety Information for the Cisco ME 3400E Ethernet Access Switches*
- *Release Notes for the Cisco ME 3400E Ethernet Access Switch*
- *Cisco ME 3400E Ethernet Access Switch Software Configuration Guide*
- *Cisco ME 3400E Ethernet Access Switch Command Reference*
- *Cisco ME 3400E Ethernet Access Switch System Message Guide*
- *Cisco Small Form-Factor Pluggable Modules Installation Notes*
- *Cisco CWDM GBIC and CWDM SFP Installation Notes*

These compatibility matrix documents are available from this Cisco.com site:

http://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html

- *Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix*
- *Cisco 100-Megabit Ethernet SFP Modules Compatibility Matrix*
- *Cisco CWDM SFP Transceiver Compatibility Matrix*
- Cisco Small Form-Factor Pluggable Modules Compatibility Matrix
- Compatibility Matrix for 1000BASE-T Small Form-Factor Pluggable Modules

8 Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

9 Cisco 90-Day Limited Hardware Warranty Terms

See the documentation CD that shipped with this product for a description of the warranty terms.

CCDE, CCENT, Cisco Eos, Cisco Lumin, Cisco Nexus, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, the Cisco logo, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0809R)

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices**.

Printed in the USA on recycled paper containing 10% postconsumer waste.

OL-16448-01